ABSTRACT

A thermal reservoir for a two-pipe hydronic air-conditioning system is disclosed. Said thermal reservoir includes a well-insulated tank for alternatively storing hot and cold water. Said thermal reservoir contains plurality of valves for directing hot water stored therein into the two-pipe hydronic air-conditioning system, thereby causing cold water within the two-pipe hydronic air-conditioning system to be displaced therefrom and into well insulated storage tank. Said process is fully reversible in that cold water displaced from the two-pipe hydronic air-condition system into said thermal reservoir may be subsequently directed from the thermal reservoir and restored to the two-pipe hydronic air-conditioning system and hot water therefrom directed back into storage. Accordingly a two-pipe hydronic air-conditioning system may be switched between heating and cooling modes with rapidity and without waste of the energy content of said hot water and said cold water.